

**REMARKS**

Claims 13-18 and 20-29 are currently pending in the application. Claims 14-18 and 20-29 are amended with this response. While applicant acknowledges that the claims are presently being finally rejected, because such claim amendments do not raise any new issues that would require a new search, but instead merely address the antecedent basis issue highlighted in the Office Action and reduce the number of outstanding issues, entry of such amendments is believed to be proper. Consequently, entry of the amendments is respectfully requested. Reconsideration of the application in light of the following remarks is respectfully requested.

**I. ISSUE RAISED REGARDING WITHDRAWN CLAIMS 26-29**

Claims 26-29 were identified in the Office Action, and it was stated that a complete reply must include cancellation of non-elected claims. Claims 26-29, however, are a species of generic claim 13 which is pending. Consequently, it is respectfully submitted that if claim 13 is held to be allowable, that claims 26-29 that depend therefrom would then also be allowable. Accordingly, maintaining claims 26-29 as withdrawn is believed to be appropriate, and removal of this objection is therefore respectfully requested.

**II. REJECTION OF CLAIMS 18-25 UNDER 35 U.S.C. § 112, SECOND PARAGRAPH**

Claims 18-25 were rejected under 35 U.S.C. § 112, second paragraph for the term "ion shower" not having proper antecedent basis. Since such term was referred to as an "ion shower system" in claims 13, claims 14-18 and 20-29 have all been amended to recite an "ion shower system", and thus such claims now have proper antecedent basis. Accordingly, such amendments reduce the number of outstanding issues, and thus such amendments are believed to be proper after the final rejection of the claims. Therefore entry of the amendments and withdrawal of the rejection is respectfully requested.

**III. REJECTION OF CLAIMS 13-25 UNDER 35 U.S.C. § 103(a)**

Claims 13-25 were rejected under 35 U.S.C. § 103(a) as being unpatentable over WO 2001/63981 (Weiler) in view of U.S. Patent 5,846,883 (Moslehi). Withdrawal of the rejection is requested for at the least the following reasons.

- i. The combination of Weiler and Moslehi is improper because a combination therefore will render Weiler unsatisfactory for its intended purpose.*

In the response to the previous Office Action, an argument was presented that the proposed combination of Weiler and Moslehi was improper due to a lack of the requisite motivation to make the suggested combination. More particularly, the Office Action conceded that Weiler did not teach a plurality of conductor segments serially connected together through a plurality of capacitors, however, since Moslehi did provide such a feature, a combination of Weiler and Moslehi taught the claim feature at issue and rendered claim 13 obvious thereover.

In traversing the rejection, the previous argument proffered by the applicant in the response of June 6, 2007 was that since Weiler taught a particular combination of conductor segments in which ***each conductor segment was connected to its own separate high frequency generator***, a modification of Weiler in view of Moslehi would not be proper because such a modification would render Weiler unsatisfactory for its intended purpose. The present Final Office Action rejected the submitted argument by stating that the above argument constituted an attack on the Weiler reference individually when the rejection was based on a the combination of references. (O.A., 8/23/07, p. 9, paragraph 10). It is respectfully submitted that the above rationale for maintaining the rejection constitutes either a misunderstanding of the law or a misapplication of the principle as applied to the present facts in this application.

While it is true that nonobviousness cannot be shown by attacking references individually, that is not what is being done in the present argument. Rather, an analysis has been made as to whether one of ordinary skill in the art would have been motivated

to modify Weiler in view of Moslehi when evaluating both references in their entirety. More particularly, claim 13 recites an ion shower system having a plasma source that comprises a plurality of conductor segments and ***a plurality of capacitors serially connected through the conductor segments***. As conceded in the Office Action, Weiler does not teach this feature, however, the Office Action asserts that Moslehi does teach this feature and that it would have been obvious to arrive at the feature of claim 13 by combining together Weiler and Moslehi. (See, O.A., 3/12/07, p. 9). Therefore according to the Office Action it would have been obvious to modify Weiler, which the Office Action concedes does not have capacitors serially connected through the conductor segments, based on the teaching of Moslehi which does teach such an arrangement. Such a modification, however, would only be appropriate in those instances where one of ordinary skill in the art would be motivated to do so. In this particular case, however, based on the teachings of Weiler when properly evaluated as a whole, ***a modification thereof in view of Moslehi would render Weiler unsatisfactory for its intended purpose***, and the MPEP explicitly states that in such instances no motivation exists for such modifications.

More particularly, Weiler discloses in Figs. 1 and 2a-2j (and corresponding text) a plasma source having a plasma excitation electrode. As shown in Figs. 2a-2j, the excitation electrode (that corresponds to the claimed conductor segment of claim 13 according to the Office Action) may comprise a single element or multiple segments. (See, e.g., Figs. 2e-2j). ***In instances where the excitation electrode 3 consists of multiple segments, each segment or electrode is connected to its own separate matching network and its own separate high frequency generator.*** (See, e.g., Col. 4, lines 27-30). According to Weiler, connecting each electrode segment to its own separate power source (generator) is provided ***to generate different kinds of plasmas so as to control and adjust beam characteristics.*** (See, e.g., Col. 4, lines 30-33). Thus the intended purpose of Weiler is to have flexibility to generate different kinds of plasmas by being able to individually address or drive each electrode segment.

Therefore one of ordinary skill in the art would not be motivated to modify the multiple, isolated electrode segment configurations of Weiler by serially coupling such segments together *via* capacitors because doing so would contravene the intended purpose of Weiler (which was to separately drive each segment with its own power source to generate different plasmas and thus control and adjust beam characteristics) by eliminating the ability to generate different plasmas by individually driving the various conductor segments. Therefore the requisite motivation to combine the cited art does not exist, and consequently the combination of Weiler and Moslehi is improper. MPEP § 2143.01 (V) (*citing In re Gordon*, 733 F.2d 900 (Fed. Cir. 1984) (holding that if a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification)).

Accordingly, withdrawal of the rejection is respectfully requested.

- ii. A combination of Weiler and Moslehi does not teach the invention because such a combination does not result in a series connection of capacitors and conductor segments residing within the chamber, as recited in claim 1.*

Regarding claim 13, an argument was provided in the previously submitted response that the combination of Weiler and Moslehi fail to render claim 13 obvious because neither reference teach a series arrangement of conductor segments and capacitors that resides ***within the chamber*** as claimed. In rejecting this argument, the final Office Action again asserted that each of the references were improperly being attacked individually. Applicant respectfully disagrees.

Both Weiler and Moslehi were analyzed to ascertain whether either reference provided a teaching of an arrangement within a chamber. The Office Action conceded that Moslehi explicitly teach a series arrangement of conductor segments and capacitors ***external*** to the chamber. (O.A., 8/23/07, p. 9, paragraph 11) (*See also*, e.g., paragraph [0057], lines 15-21, and paragraph [0113], lines 6-9 of Moslehi). While

the Office Action asserts that Weiler do teach its conductor segments in its chamber, applicant respectfully submits that the conclusion drawn therefrom that any capacitors serially coupled to the conductors would also be in the chamber is incorrect.

With reference to Fig. 1 of Weiler, the outer wall 7 of the chamber defines three sides of the chamber, while a contoured mounting element 1 defines the fourth chamber side. While the excitation electrodes 3 reside inside the chamber, **they electrically connect to their respective power source 8** via a conductor that extends **outside of the chamber** via a feedthrough 9. Consequently, **the electrical connection of an excitation electrode to any other components** (the matching network 2 and RF source 8) **happens external to the chamber** (i.e., on the opposite side of the mounting element 1 than the electrode 3). Therefore one of ordinary skill in the art, upon evaluating Weiler as a whole, would couple a capacitor to a respective excitation electrode 3 at the end of the external conductor that extends into the chamber *via* the feedthrough 9, just as the matching network 2 and RF source are connected to the electrode **outside of the chamber**. This characterization of Weiler is further supported by the teaching of Weiler, wherein the magnetic field coils 4 are also located **external** to the chamber 7 *via* the contoured mounting element 1, as illustrated in Fig. 1.

Therefore neither reference provides any support for a series arrangement of conductor segments and capacitors **within the chamber** as claimed. Therefore the references are not being attacked individually, but instead are each being evaluated for what they teach in their entirety. **Since neither reference provides any teaching or suggestion for a series arrangement within the chamber, the combination of Weiler and Moslehi fail to render the invention of claim 13 obvious.** Therefore a withdrawal of the rejection of claim 13 is respectfully requested for at least this additional reason.

- iii. ***The combination of Weiler and Moslehi does not teach an azimuthally symmetric arrangement of the conductor segments and capacitors, as recited in claim 20.***

The Office Action, in responding to our arguments that the subject matter of claim 20 is not taught in either reference, and thus their combination certainly cannot obviate the claim, incorrectly asserts that our arguments constitute an inappropriate attack on the references individually, as opposed to considering their combination. This is incorrect, because the point being made is that when considering both references in combination ***the combination does not provide for the claim feature.***

Claim 20 depends upon claim 13, and further recites that the ***series arrangement*** of conductor segments ***and*** capacitors are arranged within the chamber ***in an azimuthally symmetric fashion.*** Initially, Moslehi does not teach the **capacitors arranged azimuthally symmetric within the chamber** as recited in the claimed invention. While ***conductor*** segments 186, 190 and 194 in Fig. 2 of Moslehi are arranged azimuthally, ***the capacitors that couple such segments together are not arranged in the azimuthally symmetric fashion as claimed.*** Rather, such capacitors follow the direction of the jumper water channels 214, 218, 226 and 230 illustrated in Fig. 2, and which is NOT azimuthally symmetric. ***Weiler does not remedy the deficiencies of Moslehi.*** In Figs. 2e-2j, none of the multiple conductor segment configurations are arranged azimuthally.

In the Office Action, it states that Weiler teach conductor segments that are azimuthally symmetric, citing to element 3 of Figs. 1, 2 and 4, respectively. In looking at Figs. 2a-2j, it is noted that only Figs. 2e-2j illustrates multiple conductor segments. ***Of those figures, none of them show the conductor segments arranged azimuthally.***

For example, in Fig. 2j, four conductor segments are arranged in a square, but such segments are not arranged azimuthally as claimed. Therefore neither reference teach this arrangement, either alone or in combination. Consequently, claim 20 is non-obvious over the cited art. Accordingly, for at least this additional reason, withdrawal of the rejection is respectfully requested.

- iv. ***The combination of Weiler and Moslehi does not teach a plurality of multi-cusp magnets on side portions of the chamber, as recited in claim 23.***

Claim 23 depends upon claim 13, and further recites that side portions of the chamber comprise a plurality of ***multi-cusp magnets*** operable to produce multi-cusp magnetic fields. The combination of the cited references does not teach this feature.

Contrary to the assertion within the Office Action (see O.A., p. 6), Weiler does not teach a plurality of multi-cusp magnets as claimed. Weiler does teach a magnetic field coil arrangement, as illustrated in Fig. 1, however, such coil arrangement does not constitute multi-cusp magnets and do not produce multi-cusp fields as claimed.

The Office Action ignores that lack of teaching in Weiler, and instead asserts that "the magnetic field in discussion is a function of Weiler's current process variable. When the structure recited in the reference is substantially identical to that of the claims, claimed properties or functions are presumed to be inherent." (O.A., 8/23/07, p. 11, paragraph 12). This assertion is incorrect in light of the Weiler reference.

Weiler clearly show a magnetic field coil arrangement 4 and such coil arrangements are typically employed to generate a generally uniform dipole field therebetween. ***A plurality of multi-cusp magnets is not the same as the coil arrangement of Weiler, and a dipole magnetic field is not anything similar to a plurality of multi-cusp magnetic fields,*** and such a distinction is well known and appreciated by one of ordinary skill in the art.

Therefore claim 23 is non-obvious over the cited art for at least this additional reason. Accordingly, withdrawal of the rejection of claim 23 and depending claims 24-25 is respectfully requested.

#### **IV. CONCLUSION**

For at least the above reasons, the claims currently under consideration are believed to be in condition for allowance.

Should the Examiner feel that a telephone interview would be helpful to facilitate favorable prosecution of the above-identified application, the Examiner is invited to contact the undersigned at the telephone number provided below.

Should any fees be due as a result of the filing of this response, the Commissioner is hereby authorized to charge the Deposit Account Number 50-1733, EATNP146US.

Respectfully submitted,  
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